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| TRADE   |  | Application Number 10/666,424  Filing Date 09/19/2003   |
|   | FORM   | First Named Inventor Kamil Paruch et al.  |
|   |  | Artinit   |
| (10   | be used for all correspondence after initial i | Examiner Name   |
| Tota  | al Number of Pages in This Submission          | 6 Attorney Docket Number OC01626K   |
|   |  | ENCLOSURES (Check all that apply)   |
| Fee Transmittal Form  Fee Attached  Amendment/Reply  After Final  Affidavits/declaration(s)  Extension of Time Request  Express Abandonment Request  Information Disclosure Statement |  | Drawing(s)  Licensing-related Papers  Petition Petition to Convert to a Provisional Application Power of Attorney, Revocation Change of Correspondence Address Terminal Disclaimer Request for Refund CD, Number of CD(s)  Appeal Communication to Board of Appeals and Interferences Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) Proprietary Information Status Letter Other Enclosure(s) (please Identify below): Cert. of Mailing - 1pg.; References (9); PTO-1449 Form- 1pg. in dup.; Post Card |
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PTO/SB/92 (08-03) (Modified)

Application No.: 10/666,424 Filing Date: 09/19/2003 Applicant: Kamil Paruch et al.

Title: NOVEL IMIDAZOPYRAZINES AS CYCLIN DEPENDENT KINASE INHIBITORS

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| Applicant(s)                               | Kamil                       | Paruch                          | n e <i>t al</i> .   | :   | Group Art Unit:   |  |  |  |
| Serial No.: <b>10/666,424</b>              |                             |                                 |   | :   | Examiner:   |  |  |  |
| Filed:                                     | 09/19/2                     | 003                             |   | :   | Attornov Docket No.: OC01626K   |  |  |  |
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|                                     |  |   |                            |   | etfully submitted,<br>NG-PLOUGH CORPORATION   |
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U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

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APPLICATION NO.: **10/666,424** 

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

APPLICANT:

Kamil Paruch et al.

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|                                   | AL        | EP 0 778 277   | 06/11/1997              |                | EPO                           |          |            |             |                  |                |
|                                   | AM        | WO 02/06286  | 01/24/2002              |                | PCT                           |          |            |             |                  |                |
|                                   | AN        | WO 88/04298  | 06/16/1988              |                | PCT                           |          |            |             |                  |                |
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|                                   | AQ        | Vesely <i>et al.</i> , "Inhibi<br>(1994), <b>224</b> : 771-78                        | tion of Cyclin          | -Dependent K   | inases by F                   | Purine A | nalogues   | s", Eur. J. | Biochen          | n              |
|                                   | AR        | Senderowicz et al.,<br>Kinase Inhibitor, in I<br>1998), <b>16</b> (9): 2986-         | Patients with 2999.     | Refractory Ne  | oplasms", .                   | Journal  | of Clinica | al Oncolo   | gy (Septe        | ember          |
|                                   | AS        | Meijer et al., "Bioche<br>the Cyclin-Depende   | nt Kinases C            | DC2, CDK2 a    | nd CDK5",                     | Eur. J.  | Biochem.   | (1997), 2   | <b>243</b> : 527 | or of<br>-536. |
|                                   | AT        | Bible et al., "Cytoto:<br>Antineoplastic Ager<br>15, 1997), <b>57</b> : 3375         | its: The Impo<br>-3380. | rtance of Seq  | uence of Ad                   | dministr | ation", Ca | ancer Re    | search (A        | August         |
|                                   | AU        | Shiota <i>et al.</i> , "Synth<br>Angiotensin II Rece<br>(1999), <b>47</b> (7): 928-9 | ptor Antagon<br>938.    | ists: Pyrazolo | 1,5-α]pyrim                   | nidine D | erivatives | s", Chem.   | . Pharm.         |                |
|                                   | AV        | Yasuo Makisumi, "S   | Studies on the          | Azaindolizine  | Compoun                       | ds. XI.  | Synthesis  | of 6,7-D    | isubstitu        | ted            |
|                                   |           | Pyrazolo[1,5-α]pyrir   | nidines.", Ch           |                |                               |          | -626.      |             |                  | _              |
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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U.S. DEPARTMENT OF COMMERCE

PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO .: OC01626K

APPLICATION NO.: 10/666.424

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

APPLICANT: Kamil Paruch et al.

FILING DATE:

9/19/2003

GROUP:

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|                      |    |                    | U.S. PA    | TENT DOCUMENTS   |       |               |          |    |
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|                      |    | NUMBER             |            |                  |       | CLASS         | YES      | NO |
|                      | AL | EP 0 778 277       | 06/11/1997 | EPO              |       |               |          |    |
|                      | АМ | WO 02/06286        | 01/24/2002 | PCT              |       |               |          |    |
|                      | AN | WO 88/04298        | 06/16/1988 | PCT              |       |               |          |    |
|                      | AO |                    |            |                  |       |               |          |    |

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

- Vesely et al., "Inhibition of Cyclin-Dependent Kinases by Purine Analogues", Eur. J. Biochem (1994), 224: 771-785. Senderowicz et al., "Phase I Trial of Continuous Infusion Flavopiridol, a Novel Cyclin-Dependent AR Kinase Inhibitor, in Patients with Refractory Neoplasms", Journal of Clinical Oncology (September 1998), 16(9): 2986-2999. Meijer et al.. "Biochemical and Cellular Effects of Roscovitine, a Potent and Selective Inhibitor of AS the Cyclin-Dependent Kinases CDC2, CDK2 and CDK5", Eur. J. Biochem. (1997), 243: 527-536. Bible et al., "Cytotoxic Synergy Between Flavopiridol (NSC 649890, L86-8275) and Various AT Antineoplastic Agents: The Importance of Sequence of Administration", Cancer Research (August
  - 15, 1997), **57**: 3375-3380. Shiota et al., "Synthesis and Structure- Activity Relationship of a New Series of Potent AU Angiotensin II Receptor Antagonists: Pyrazolo[1,5-α]pyrimidine Derivatives", Chem. Pharm. Bull.
  - (1999), 47(7): 928-938. Yasuo Makisumi, "Studies on the Azaindolizine Compounds. XI. Synthesis of 6,7-Disubstituted ΑV Pyrazolo $[1,5-\alpha]$ pyrimidines.", Chem. Pharm. Bull. (1962), **10**: 620-626.

**EXAMINER** 

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